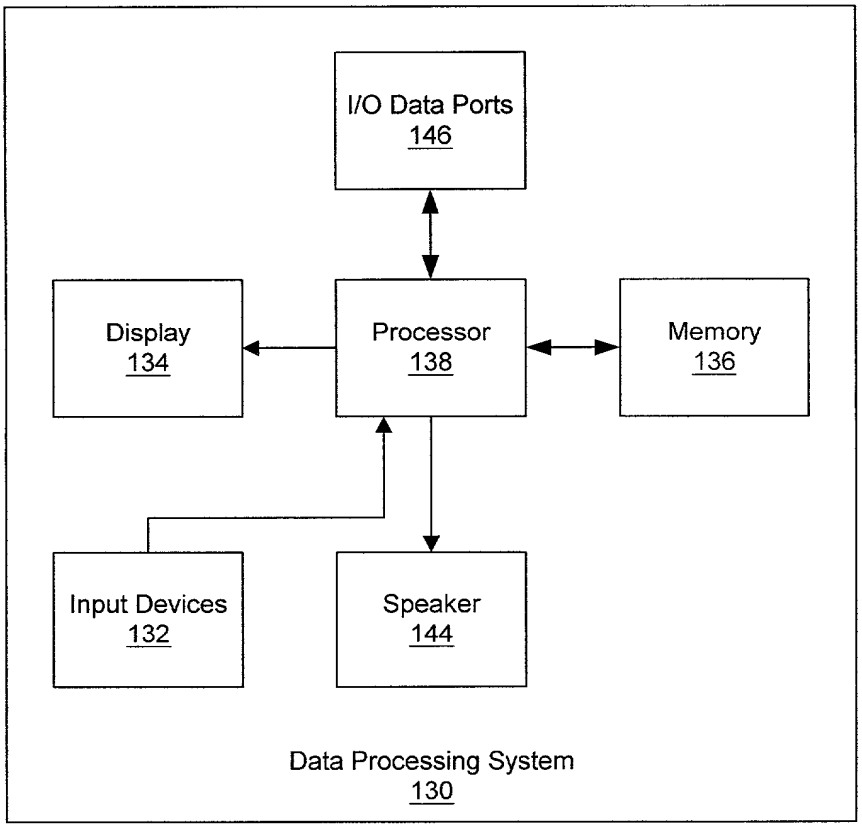
I/O Data Ports
146
Display
134
Processor
138
Memory
136
Input Devices
132
Speaker
144
Data Processing System
130

Figure 1

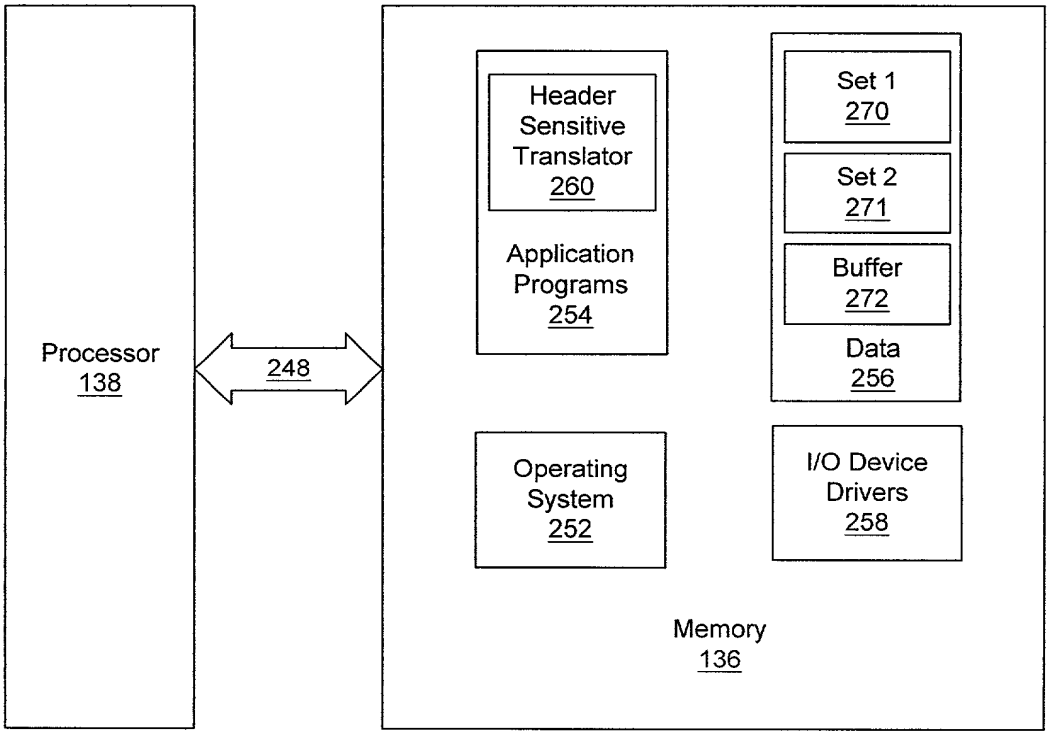
Processor
138
248
Header
Sensitive
Translator
260
Application
Programs
254
Operating
System
252
Set 1
270
Set 2
271
Buffer
272
Data
256
I/O Device
Drivers
258
Memory
136

Figure 2

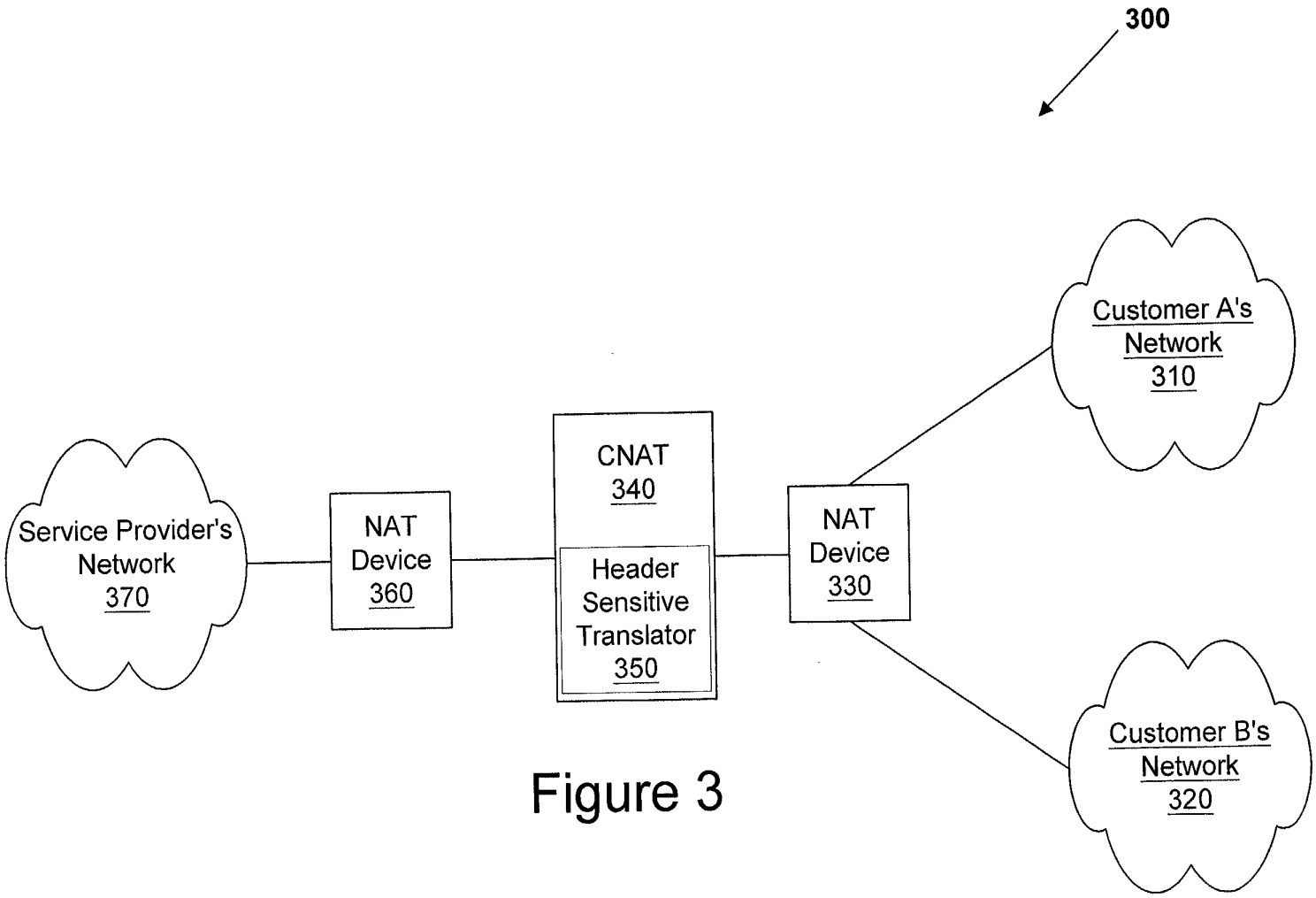
300
Customer A's Network 310
CNAT 340
Header Sensitive Translator 350
NAT Device 330
Service Provider's Network 370
NAT Device 360
Customer B's Network 320

Figure 3

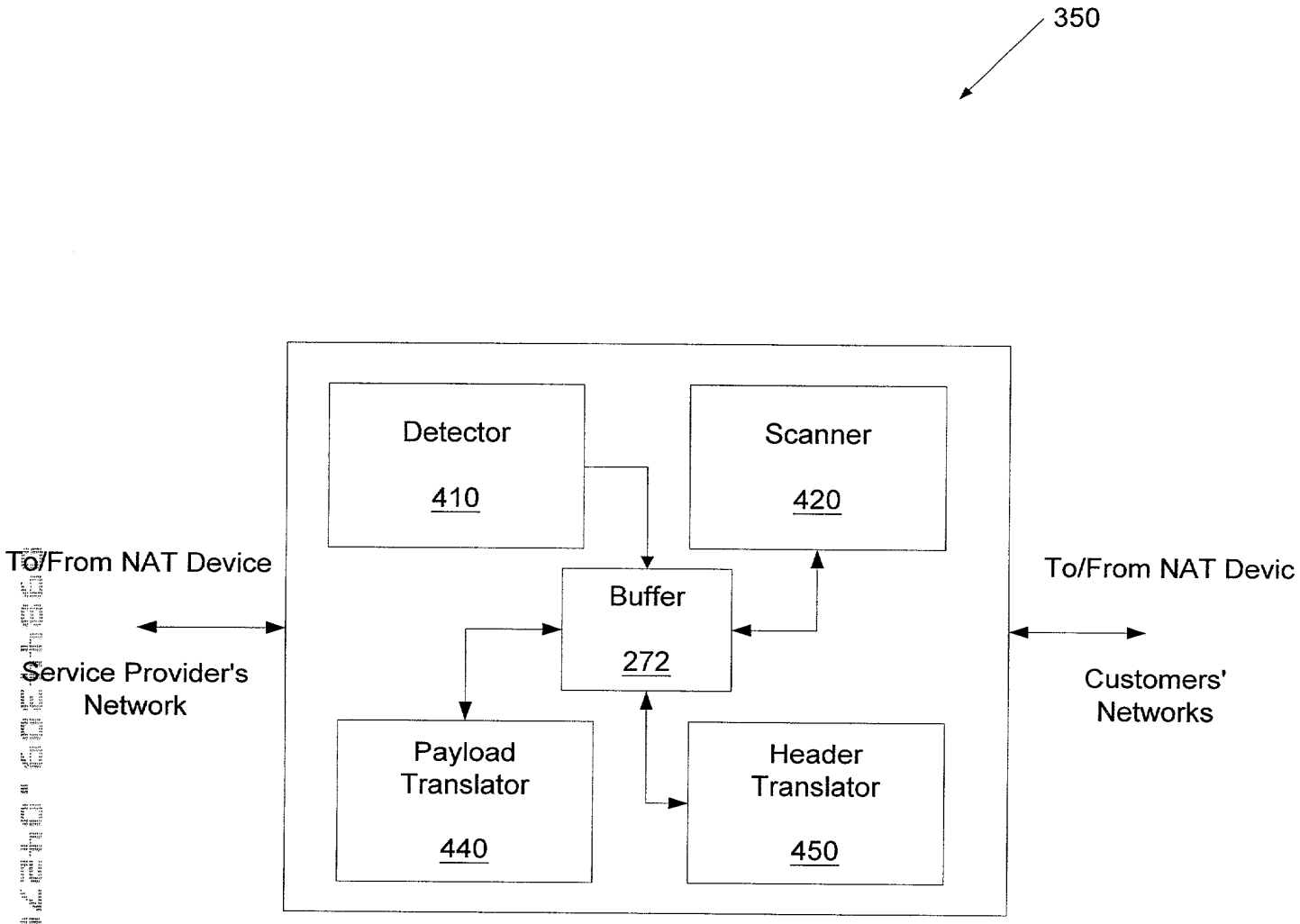
350
Detector
410
Scanner
420
Buffer
272
Payload
Translator
440
Header
Translator
450
To/From NAT Device
Service Provider's
Network
To/From NAT Devic
Customers'
Networks

Figure 4

Sets of Translation Rules	IP Address	Corresponding Normalized IP Address
Set 1 (Customer A)	10.10.x.x 92.168.x.x	9.37.x.x 9.38.x.x
Set 2 (Customer B)	10.10.x.x 92.168.x.x	9.39.x.x 9.40.x.x

27

27

Figure 5

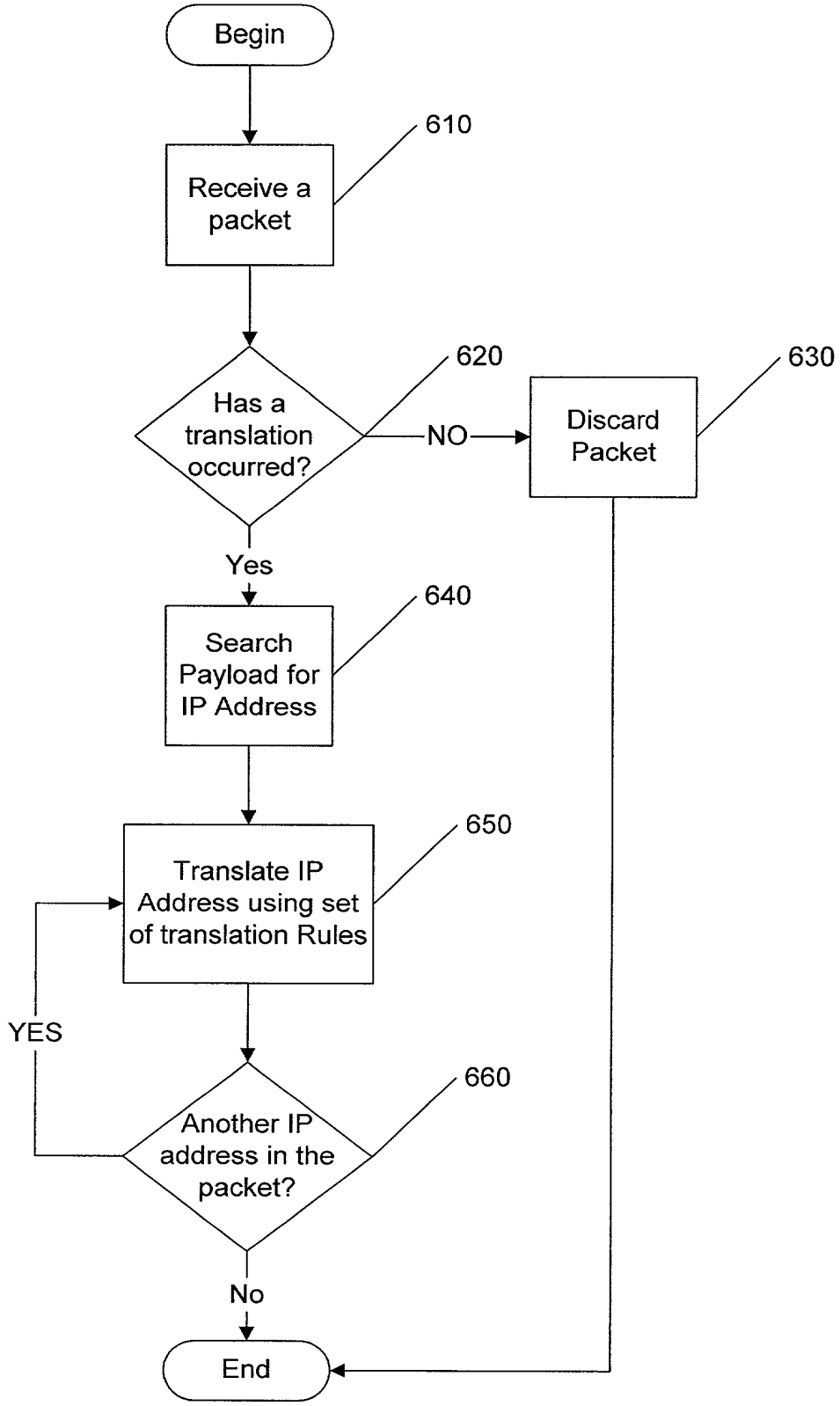
Begin
610
Receive a packet
620
Has a translation occurred?
NO
630
Discard Packet
Yes
640
Search Payload for IP Address
650
Translate IP Address using set of translation Rules
YES
660
Another IP address in the packet?
No
End

Figure 6

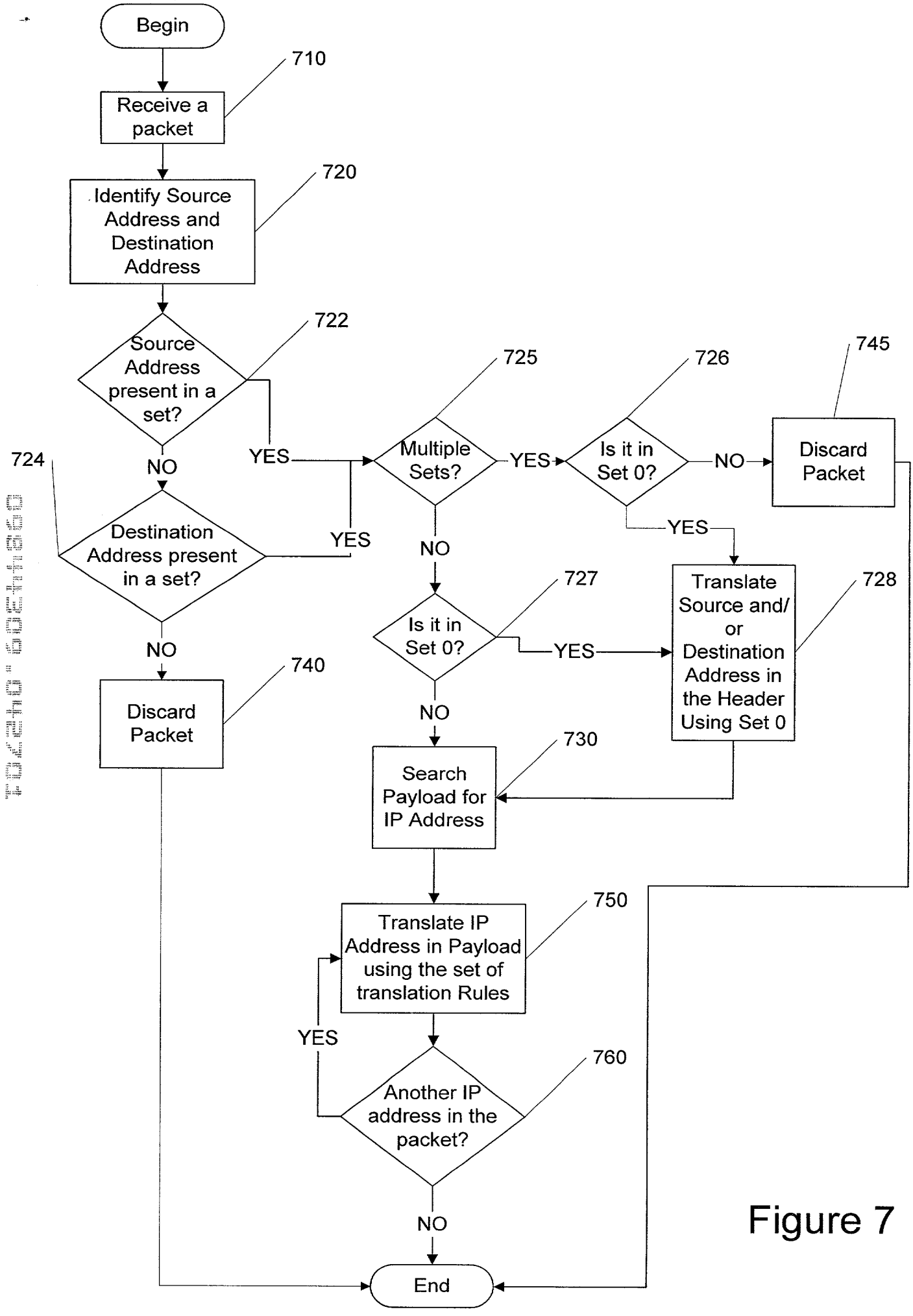
Begin
710
Receive a packet
720
Identify Source Address and Destination Address
722
Source Address present in a set?
YES
NO
724
Destination Address present in a set?
YES
NO
740
Discard Packet
725
Multiple Sets?
YES
NO
726
Is it in Set 0?
NO
YES
745
Discard Packet
727
Is it in Set 0?
YES
NO
728
Translate Source and/ or Destination Address in the Header Using Set 0
730
Search Payload for IP Address
750
Translate IP Address in Payload using the set of translation Rules
760
Another IP address in the packet?
YES
NO
End

Figure 7